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(54) **Chip carrier substrate**

(57) A process for manufacturing a chip carrier substrate, the process including the steps of providing a first layer of copper conductor on a substrate, forming a first layer of barrier metal on the first layer of copper conductor, forming a layer of aluminum on the first layer of barrier metal, forming a second barrier metal on the aluminum layer, patterning the top barrier metal in the form of

studs, anodizing the aluminum unprotected by the top barrier metal, removing the aluminum oxide and patterning the first copper layer, removing all the exposed barrier metal; surrounding the studs and the copper conductor with a polymeric dielectric; polishing the polymeric dielectric to expose the studs; and forming a second layer of copper conductor on the planar polymeric dielectric.

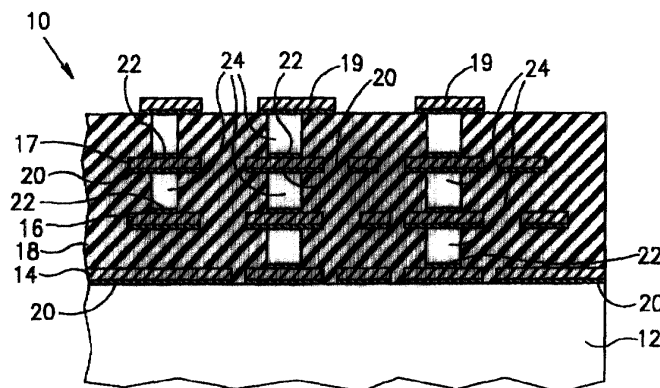


FIG. 1

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EUROPEAN SEARCH REPORT

Application Number
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Place of search THE HAGUE		Date of completion of the search 4 April 2002	Examiner Ahlstedt, M
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